REMARKS

Claims 1-7 were submitted for examination. The examiner objected to the specification as failing to provide an adequate written description of the claimed invention and all claims were rejected under 35 U.S.C. 112, first paragraph on that basis. Claims 1-4 were rejected under 35 U.S.C. 102(b) as being anticipated by Deitel ("Operating Systems") and claims 5-7 were rejected under 35 U.S.C. 103 as being unpatentable over Deitel.

Claims 3, 4 and 7 have been cancelled. It is believed the arguments below are adequate to overcome the Examiner's rejections in regard to the remaining claims. No new issues are raised and no further searching is required. Reconsideration and allowance of this application is respectfully requested.

35 U.S.C. 112 Rejection

The Examiner requested that specific references to the locations in the specification be given.

The steps required to implement the invention are shown in Figs. 3A and 3B. In the specification, lines 2-9 on page 9 explain that a KFC should be divided into phases, with "each phase being associated with a step or set of steps in KFC 300 at which a complication is possible. The appropriate phase identifier is included with each KFC 300 instruction

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and is passed to SC 350 when KFC 300 is promoted." From page 9, line 15 through page 13, line 12, the specification goes step by step through a KFC and discusses the possible scenarios for promotion. In particular, page 11, line 19 through page 12, line 18 discuss the specific promotion-related steps of 336, 338, 340, 352, 360, 362 and 364. Each disclosed step is straightforward. Demotion is discussed in the specification at page 13, lines 3-12 and shown in Fig. 3B.

The intended readers of this disclosure are programmers skilled in the art of developing kernel calls and system calls. The design, control and uses of various types of system calls and fast kernel traps are known and understood in the prior art. The "exceptions" referred to in the specification are the particular events or conditions that interfere with normal execution in a specific system. Anyone qualifying as skilled in the art of operating system kernel programming would understand how to program calls and traps and would know what the exceptions are in the particular operating system environment in which that person is skilled.

35 U.S.C. 102(b) Rejections

Claims 1-4 were rejected under 35 U.S.C. 102(b) as being anticipated by Deitel. Claims 3 and 4 have been cancelled.

Claim 1

Regarding claim 1, the Examiner states in paragraph 5(v) of the communication of 1/3/96 that Applicant's prior communication did not adequately point out the specific deficiencies in the Deitel reference. In this regard, the Examiner is referred specifically to steps (b) and (c) in claim 1.

Applicant's claim 1 involves a method for the interaction between kernel function calls and system calls during execution of a processing thread. To determine the possible relevance of Deitel in this regard, the equivalent elements in Deitel must be identified.

The Examiner's comments in paragraph 5(i) show how the Examiner is applying Deitel to the claimed method. In the second and fourth sentences of 5(i), the Examiner states that Deitel's initial interrupt processing, discussed in section 3.9 of Deitel, is equivalent to Applicant's kernel function call. In the fourth sentence of 5(i), the Examiner states that Deitel's "appropriate system process", to which the initial interrupt processing passes control, is equivalent to Applicant's system call. Having defined Deitel in this manner, the disclosure of Deitel must be examined to determine what method Deitel teaches for the operation and interaction between these two elements.

In the third sentence of 5(i), the Examiner attributes

a capability to Deitel that is not supported by the Deitel disclosure. In the third sentence, the Examiner says "Deitel teaches monitoring for a complication during execution of the kernel function call". Since the Examiner has described the Deitel interrupt processing as being equivalent to the kernel function call, then the Exmainer is saying that Deitel teaches monitoring for a complication during execution of initial interrupt processing. Deitel does not support this interpretation. Both the last paragraph on page 61 and the last two paragraphs on page 62 make it clear that Deitel teaches that <u>interrupts are disabled while the initial interrupt processing is underway</u>. The second paragraph on page 575, referred to by the Examiner, clearly relates to activities during system call processing <u>not</u> during interrupt processing.

In summary, a specific limitation not taught by the Deitel reference is step (b) of claim 1.

Claim 2

Claim 2 adds three additional steps to the method of claim 1. In paragraph ii, the Examiner states that Deitel teaches all three of these steps. Applicant disagrees.

As for step (c)(3), the Examiner asserts that "Deitel teaches monitoring for a suspended state in the system call as nucleus functions to suspend and resume processing". In support of this statement, the Examiner refers to "page 62".

Presumably the Examiner is referring to the words "Process suspension and resumption" in the summary of nucleus functions in 3.9.1.

Suspending and resuming processing is well known. What is new in this claim is monitoring for a suspend state occurring during system call processing and demoting to a kernel function call if a suspend state is reached. Deitel does not teach or contemplate monitoring for a suspend state because it has no reason to do so. Nothing in Deitel teaches or suggests that any change in processing flow might ever take place when a system call reaches a suspend state.

The Examiner's comment in the second sentence of paragraph ii is unsupported by the Deitel disclosure. In paragraph i the Examiner defines Applicant's kernel function call as being equivalent to Deitel's interrupt processing. Now in paragraph ii, the Examiner is stating that Deitel teaches "demoting from the system call to the kernel call and continuing execution in the kernel function call". This, using the Examiner's position from paragraph i, would mean that Deitel teaches demoting back to the interrupt processing function. This is clearly not the teaching of Deitel. Nothing in Deitel suggests passing execution back to the interrupt handler once it has done its job and has passed processing to the "appropriate system process".

Claims 5 and 6

Inherent in Applicant's idea of passing "an identifier indicating the amount of kernel function call execution that had been completed at the time the complication was detected" is the notion that it is possible for kernel function call processing to be interrupted before it has been completed. As noted above, the Examiner equates Deitel interrupt processing with the kernel function call. Nothing in Deitel suggests that there might be any circumstance in which its interrupt processing could be interrupted based on another complication. Deitel specifically teaches that additional interrupts are disabled during interrupt processing, therefore, clearly there is no suggestion in Deitel of monitoring for a complication during interrupt processing.
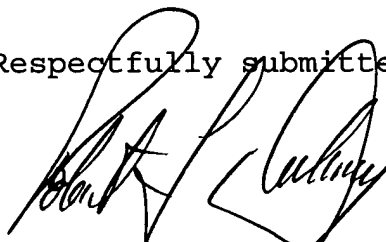
Claims 5 and 6 involve the passing of a specific identifier not disclosed or suggested by Deitel: "an identifier indicating the amount of kernel function call execution that had been completed <u>at the time the complication was detected</u>." Since Deitel's interrupt processing cannot be interrupted by a complication, there is no suggestion that there is any need to identify the amount of interrupt processing that had been completed at the time a complication was detected.

In summary, claims 1, 2, 5 and 6 contain methods not taught or suggested by the Deitel reference and the Examiner is respectfully requested to reconsider the rejections of the

claims. If any additional fee is required by the filing of this amendment, the Commissioner is hereby authorized to charge Deposit Account 04-0165.

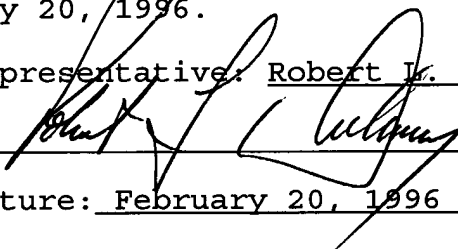Date: February 20, 1996   Respectfully submitted,

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